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(54) **METHOD OF MANUFACTURING A SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE**

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(57) **ABSTRACT**

A method of manufacturing a semiconductor integrated circuit device comprises forming a gate insulating film on a surface of a semiconductor substrate of a first conductivity type, forming a polycrystal silicon film on the gate insulating film, etching the polycrystal silicon film to form a gate electrode on a portion of the gate insulating film, etching the gate insulating film except at the portion thereof where the gate electrode has been formed, and forming a thermal oxide film on the semiconductor substrate at regions corresponding to the etched gate insulating film. Impurities of a second conductivity type are implanted into a source region in the semiconductor substrate through the thermal oxide film to form a body region of the second conductivity type. The semiconductor substrate is then heated at a temperature of 1000° C. or higher. Impurities of the first conductivity type are then implanted into the body region at an inclination angle equal to or greater than 7° with respect to a line perpendicular to the surface of the semiconductor substrate so that the impurities of the first conductivity type are implanted to a depth from the surface of the semiconductor substrate which is less than a depth of the source region from the surface of the semiconductor substrate.

6 Claims, 8 Drawing Sheets